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(54) Title: METHOD AND MATERIALS RELATING TO NEUROGENESIS

(57) Abstract: Methods for promoting dopaminergic neuronal development and producing neural cells having a dopaminergic phenotype. Dopaminergic neural cells may be used for treating individuals having a neurodegenerative disease such as Parkinson's disease. Dopaminergic cells may be implanted into the brain of the individual, and/or dopaminergic neural development may be induced or enhanced in the brain of the individual. Methods comprise expressing a nuclear receptor of the NG4A subfamily, e.g. Nurr1, above basal levels within the cell and treating the cell with a Wnt ligand, thereby producing or enhancing proliferation, self-renewal, survival and/or dopaminergic induction, differentiation, survival or acquisition of a neuronal dopaminergic phenotype. The cell may be co-cultured with astrocytes or glial cells and may be contacted with an FGF growth factor.



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